



## Lake Chabot Fisheries Report 2013

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### Introduction

The purpose of this report is to give the public an overall view of the condition of the fisheries in the District's managed lakes. The surveys conducted for this report serve the purpose of identifying general trends in fish communities which aid in making management decisions. By analyzing these trends over time, our goal is to make decisions that ultimately improve recreational fisheries and the overall health of our lake ecosystems. We hope this information will help you understand the fisheries dynamics in our beautiful lakes.

### Methods

#### *Fish communities*

Fish community surveys are conducted annually at the same sites from June-July. Surveys are conducted at night using an electro-fishing boat. This method utilizes an electrical current sent from the boat through the water which temporarily stuns the fish for easy collection. Upon collection, fishes are identified, measured for length and weight, and released back into the lake. Nine sites were chosen at Lake Chabot along the nearshore zones. Results for this report include the years 2008-2013.

#### *Bass populations*

Adult largemouth bass populations are estimated annually during the spring months (March-May) using a simple mark-recapture method. Bass are collected and tagged just behind the dorsal fin with an individually numbered yellow Floy tag. This procedure is repeated one or two more times over weekly intervals and the number of bass recaptured is recorded. From these data, the number of adult bass can be estimated. For this report we estimated bass populations in Lake Chabot from 2007 to 2013 (Fig.4).

Lake Chabot Catch Per Unit Effort

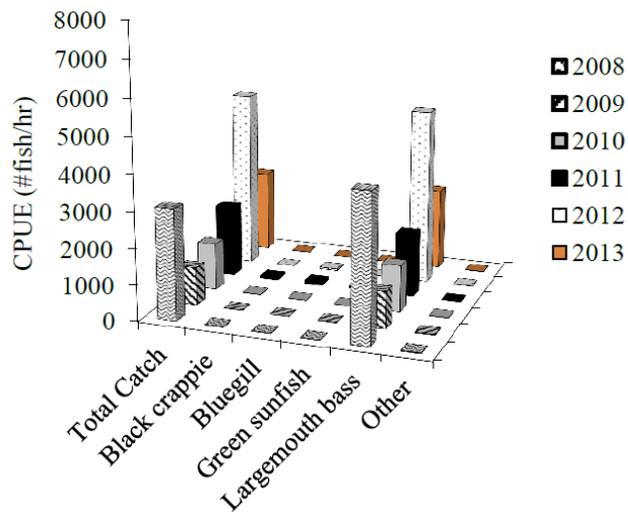


Figure 1: Catch results from fish community surveys from 2008-2013. CPUE is total number of fish caught per hour.

## Results

### *Fish communities*

Total catch rate was highest in 2012, and largemouth bass dominated all years (Figs. 1 and 2). In 2011 we did see an increase in bluegill, green sunfish, and black crappie catch compared to other years (Fig. 2); however, overall the fish community in Lake Chabot is fairly simple consisting mainly of largemouth bass. Although they weren't included in this report, inland silversides are an important forage fish for predators in Lake Chabot and we continue to

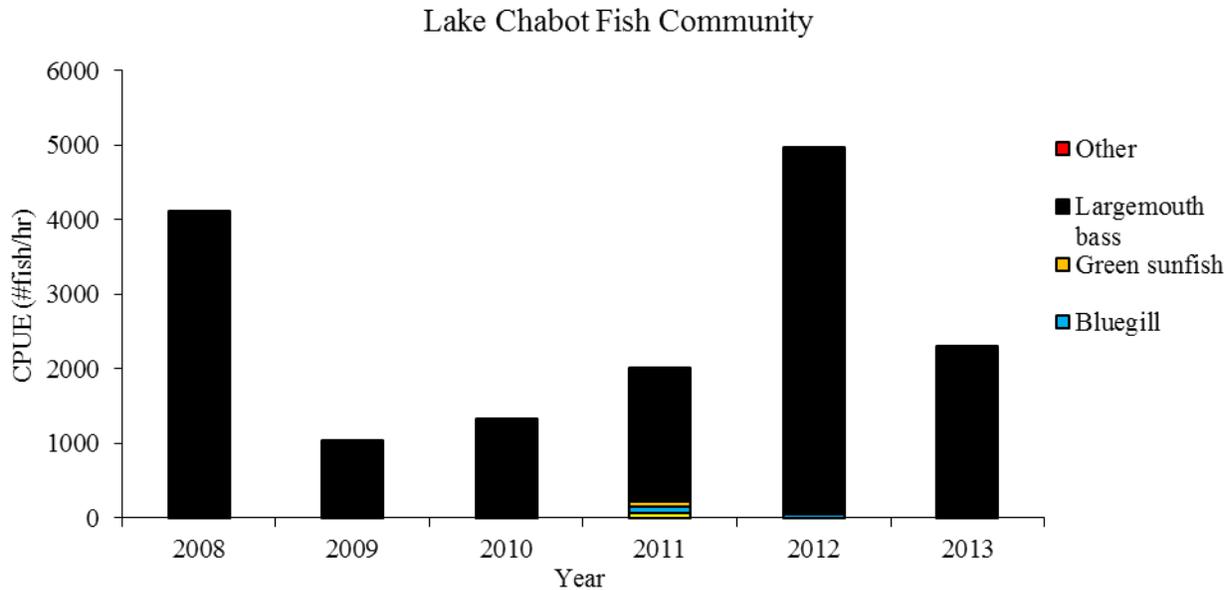


Figure 2: Total number of fish species caught per hour during fish community surveys from years 2008-2013.

see very large schools when conducting surveys.

The largemouth bass population has very good numbers of young and adult fish (Fig. 3). High numbers of juvenile bass indicate successful spawning nearly each year and we anticipate this trend to continue, providing a very healthy largemouth bass population.

### *Bass populations*

The adult bass population appears to be holding steady at about 500 individuals (Fig. 4). It is important to note that this number reflects only the number of bass larger than 280 mm (11 in.) because that is the minimum size we tag. Lastly, surveys are conducted only in Honker Bay where, due to favorable

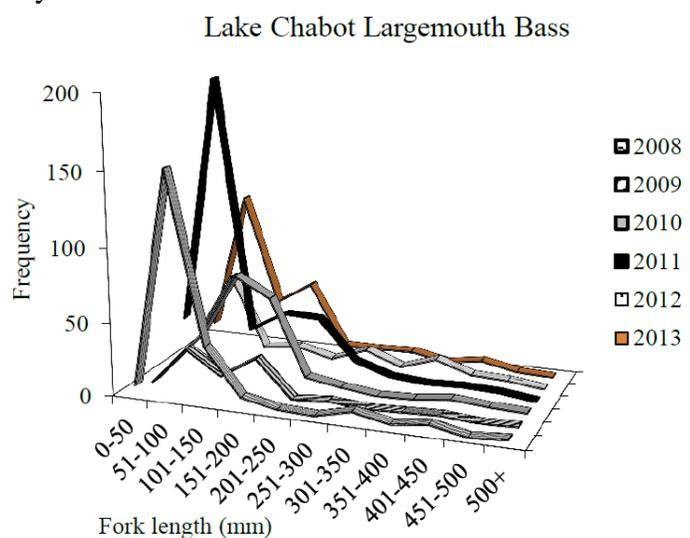


Figure 3: Size class distribution of largemouth bass during years 2008-2013. Frequency is the total number of fish in a given size class.

habitat conditions, we observe the largest concentration of largemouth bass. The highest estimate of adult bass was calculated in 2007; however, the large error bars suggest less confidence in this estimation. The population of adult bass appears relatively stable at about 500 adult fish since 2008 and we expect this trend to continue due to successful reproduction and those juveniles growing to adults!

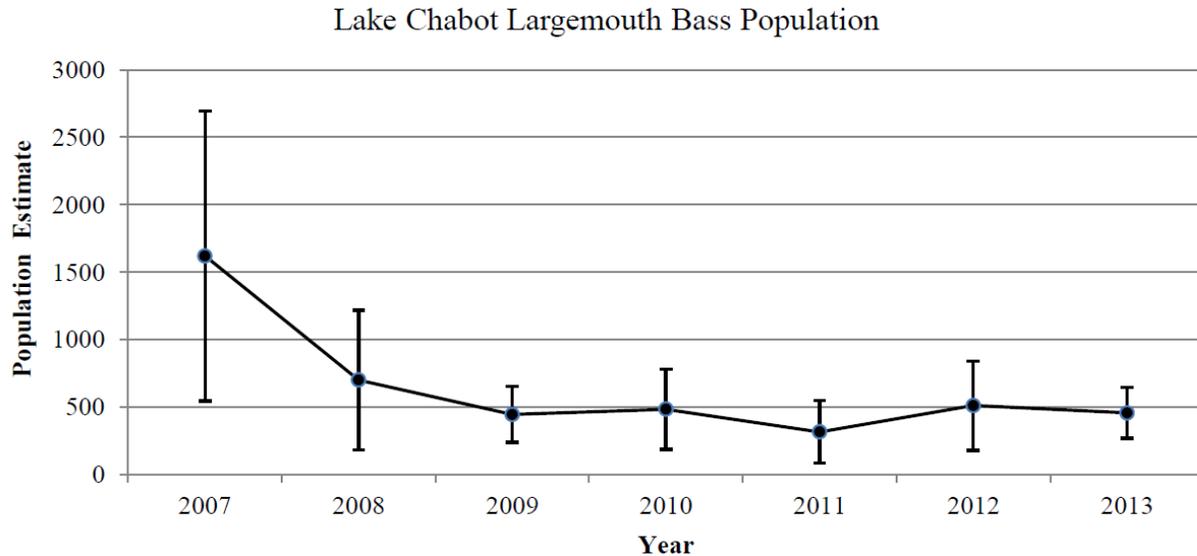


Figure 4: Estimation of number of adult largemouth bass in Lake Chabot. ‘Adults’ are bass that were greater than 11 inches total length. Error bars represent 95% confidence interval that the estimate falls within that range.

### *Put –n- take fisheries*

Besides the naturally reproducing fish species discussed here, Lake Chabot supports a popular put –n – take fishery for rainbow trout and channel catfish. Funded by the District’s Fishing Access permit program, Lake Chabot generated over \$65,000 in revenues and over \$102,000 was expended on fish plants in 2013. Lake Chabot received 25,000 pounds of rainbow trout from EBRPD and an additional 2,000 pounds of trout from the California Department of Fish and Wildlife in 2013. The District also planted 4,780 pounds of channel catfish during the summer months. Some of the largest fishes caught and reported by anglers in 2011 include: a 14 lb. 3 oz. channel catfish, a 9 lb. 5 oz. rainbow trout, a 9 lb. 14 oz. largemouth bass, and a 45 lb. white sturgeon which is a new lake record! This white sturgeon may be one of two sturgeon planted in Chabot in June 1996.

### **Conclusions**

The fish community in Lake Chabot is fairly simple consisting largely of inland silversides, largemouth bass, and planted rainbow trout and channel catfish. There appears to be an ample food source for bass, and thus their population has remained very stable. It is important that we continue to monitor these fish communities because the more we can learn about them, the better we can make decisions to manage this important fisheries resource.

